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10/576,398	11/30/2006	Jean-Pierre Germain	Serie 6331	3614

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EXAMINER	
ANDERSON, DENISE R	
ART UNIT	PAPER NUMBER
1797	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,398	GERMAIN, JEAN-PIERRE	
	Examiner	Art Unit	
	Denise R. Anderson	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

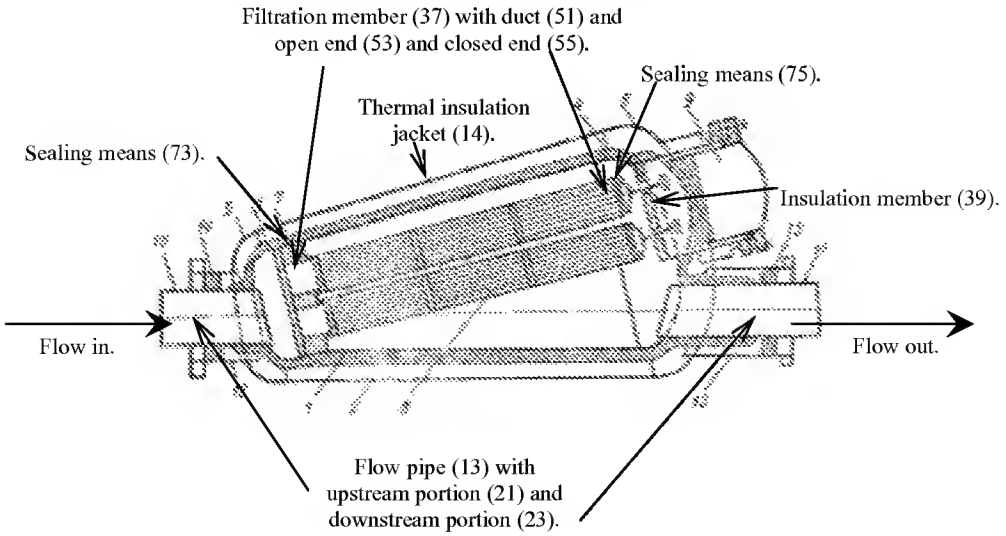
2. Claims 10-17 were amended and the previous objections for informalities are withdrawn.

Claim Rejections - 35 USC § 102

3. Claims 10 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lozhkin et al. (SU403926, Dec. 3, 1974 – The EPO abstract from the esp@cenet database, the Derwent abstract, the patent, and an English translation).

4. Regarding claim 10, Lozhkin et al. discloses "filters for cryogenic liquids." Lozhkin et al., Translation, page 2, lines 2-3. The Lozhkin et al. installation is shown below, with the flow pipe (13) having a filtration member (37) and an insulation jacket (14).

Lozhkin et al. Figure: Filter for cryogenic liquids.



5. Lozhkin et al. discloses a reversal of the flow through the apparatus relative to that of the invention. The recited "upstream" and "downstream" limitations of claim 10 do not distinguish the invention from Lozhkin et al. because apparatus claims must be structurally distinguishable from the prior art in order to be patentable. As is stated at MPEP 2114, " While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference)." As will be shown below in the instant case, the invention is not structurally distinguishable from the Lozhkin et al. installation.

6. In the above figure, Lozhkin et al. discloses that the filtration member (37) has a duct (51) through its center with an upstream open end (53) and a downstream closed end (55) with the duct being partially defined by the porous wall of filtration member (37). The duct (51) is known to exist from Lozhkin et al.'s description of the flow through the apparatus. Lozhkin et al. discloses "The flow medium enters via connection 11 into insert 8, in which it is filtered and then discharged from the filter through connection 10." Lozhkin et al., p. 3, lines 4-5. The filtration member also has a sealing means (73) at its lower end and a sealing means (75) at its upper end, as recited.

7. In the above figure, Lozhkin et al. further teaches that the flow pipe (13) has a double-walled thermal insulation jacket (14), with filtration members (37) secured inside. The flow pipe's upstream portion (21) emerges into the upstream open-end (53) of duct (51) through

sealing means (73). The flow pipe's downstream portion (23) emerges opposite the porous wall of filtration member (37).

8. In the above figure, the Lozhkin et al. also discloses that the flow pipe (13) has a branch extending parallel to the flow axis between upstream portion (21) and a free end. The branch contains two filtration members (37). The branch also contains insulation member (39) which is mounted to bear on the closed end (55) two filtration members (37) and the free end of the branch. Sealing means (75) are located between the filtration member (37) and the insulation member (39) and the sealing means (75) is maintained in compression.

9. In summary, Lozhkin et al. anticipates all claim 10 limitations.

10. Lozhkin et al. also anticipates claims 11-13, as shown in the above figure. The Lozhkin et al. sealing means (73) is maintained in compression by the filtration members (37) and the upstream portion 21 [claim 11]. The Lozhkin et al. upstream portion (21) is adjacent to the open end (53) leading in to the filtration members (37) [claim12]. The angle between the branch portion and the flow axis is between about 10 and 30 degrees [claim 13].

11. In summary, Lozhkin et al. anticipates claims 11-13.

Claim Rejections - 35 USC § 103

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lozhkin et al. (SU403926, Dec. 3, 1974 – The EPO abstract from the exp@cenet database, the Derwent abstract, the patent, and an English translation).

13. Lozhkin et al. discloses the claimed invention except for the angle between the branch portion and the flow axis being "substantially equal to 15^{O}." It would have been obvious to one having ordinary skill in the art at the time the invention was made, in the Lozhkin et al. installation, to have made a 15^{O} angle between the branch portion and flow axis, since it has been held that if the claimed device and the prior art device do not perform differently, then changing relative dimensions involves only routine skill in the art. *Gardner v. TEC Systems, Inc.*, 220 USPQ 777.

14. In summary, Lozhkin et al. discloses or suggests all claim 14 limitations.

15. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lozhkin et al. (SU403926, Dec. 3, 1974 – The EPO abstract from the exp@cenet database, the Derwent abstract, the patent, and an English translation), as applied to claim 10 above, and further in view of Gruber (US Patent No. 3,366,240, Jan. 30, 1968).

16. Lozhkin et al discloses the claimed invention except that the angle between the branch portion and the flow axis is less than 90^{O} instead of the recited "vertical" or 90^{O} angle. Applicant further recites the down stream portion (23) is opposite the porous wall (57) of the filtration member (37) toward its closed-off end (55). Gruber discloses "a line strainer or filter" and teaches the equivalence between the Lozhkin et al. structure, in Figure 1, and the recited claim 15 structure, in Figure 3. Gruber further teaches, in Figure 3, that the down stream portion (23) is opposite the middle of the filtration member (37), instead of its recited end. Gruber, Figure 3, outlet port 16 is opposite filter element 18.

17. To recap, Lozhkin et al. discloses the claimed invention except that the angle between the branch portion and the flow axis is less than 90^{O}, whereas claim 15 recites the angle is 90^{O}. Gruber shows these two in-line filter arrangements are art-recognized equivalents. Therefore, because these two in-line filter arrangements were art-recognized- equivalents at the time the invention was made, one of ordinary skill in the art would have found obvious to substitute the recited vertical in-line filter arrangement for the non-vertical in-line filter arrangement.

18. Lozhkin et al., in view of Gruber, discloses the claimed invention, except that the down stream portion (23) is opposite the middle of the filtration member (37) instead of toward its end. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have moved the Lozhkin et al. down stream portion (23) away from the middle of the filtration member (37) toward its end, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

19. In summary, Lozhkin et al., in view of Gruber, disclose or suggest all claim 15 limitations.

20. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lozhkin et al. (SU403926, Dec. 3, 1974 – The EPO abstract from the exp@cenet database, the Derwent abstract, the patent, and an English translation) as applied to claim 10 above, and further in view of Giacobbe (US Patent No. 4,717,406, Jan. 5, 1988).

21. Lozhkin et al. discloses the claimed invention except for the prefiltration member (27) having a pore size greater than or equal to 100 μm [claim 16] and the filtration member (37) having a pore size less than or equal to 0.20 μm [claim 17]. Giacobbe teaches these. Giacobbe

discloses, "A process and an apparatus for removing impurities from liquefied gases at cryogenic temperatures is provided which can be utilized on site at every stage of transport and storage subsequent to manufacture and prior to use. Liquefied gas to be purified which is at cryogenic temperatures is passed preferably through a prefilter to remove solid particulates." Giacobbe, Abstract, lines 1-7. Giacobbe further teaches, "[I]t is preferred that there is a filter having a pore size rating of about 1 micron to 1000 microns at the inlet." Giacobbe, Column 7, lines 62-64. Giacobbe further discloses that to remove "particles from the gas itself," a fine filter is used "and can be a 100 micron to as small as a 0.02 micron filter since it is gas that is being filtered at this point." Giacobbe, Column 9, lines 36-39.

22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the Lozhkin et al. installation with a prefiltration member (27) having a pore size greater than or equal to 100 μm and, also, that the porous wall of filtration member (37) have a pore size less than or equal to 0.02 μm, as taught by Giacobbe, since Giacobbe states in the Abstract, lines 1-2, that such a modification would be useful in "[a] process and an apparatus for removing impurities from liquefied gases at cryogenic temperatures."

23. In summary, Lozhkin et al., in view of Giacobbe, discloses or suggests all limitations recited in claims 16-17.

Response to Arguments

24. Applicant's arguments filed March 13, 2009 have been fully considered but they are not persuasive.

25. Applicant's arguments are listed below, with the examiner's response after each argument.

a. Regarding claim 10, applicant argues, "Lozhkin fails to disclose, teach. or suggest all the limitations of the claims, including:

a) a filtration member having a porous wall;

b) a duct formed in the filtration member and being at least partially defined by the porous wall;

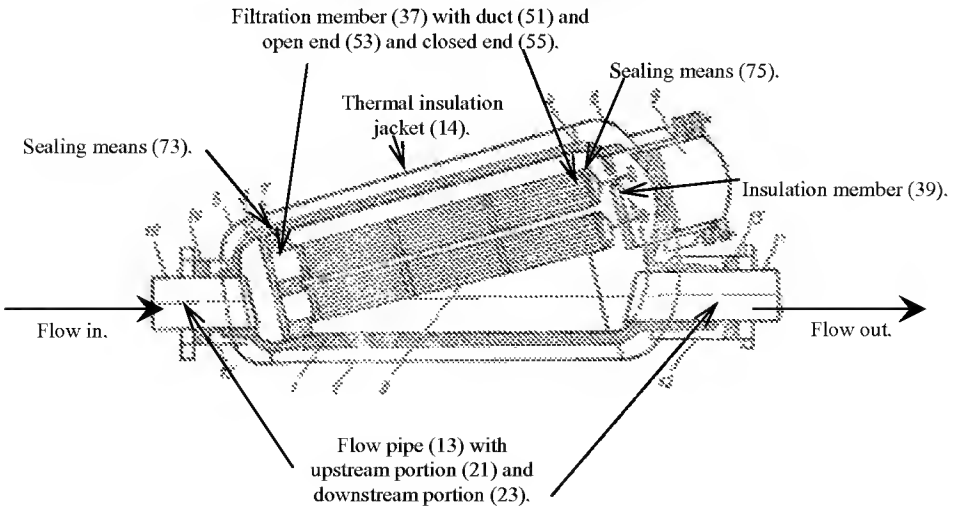
c) the duct has an open upstream end;

d) the emergence of an upstream portion (21) if a liquid flow pipe (13) into an open end (53) of a duct (51) . . . via interposed sealing means 73; and

e) emergence of a downstream portion (23) of the liquid flow pipe (13) opposite a lateral region (59) of the porous wall (57) extending in the flow axis (Y-Y') along which the duct extends." Applicant's Remarks, p. 5, lines 9-21.

The examiner responds as in the above patentability analysis.

Lozhkin et al. Figure: Filter for cryogenic liquids.



From the above figure, Lozhkin et al. discloses:

a) a filtration member (37) having a porous wall;

b) the filtration member (37) has a duct (51) through its center with the duct (51) being partially defined by the porous wall of filtration member (37).

c) the duct (51) has an open upstream end (53);

d) the emergence of an upstream portion (21) of a liquid flow pipe (13) into an open end (53) of a duct (51) . . . via interposed sealing means (73); and

e) emergence of a downstream portion (23) of the liquid flow pipe (13) opposite a lateral region of the porous wall of the filtration member (37) extending in the flow axis along which the duct (51) extends.

b. Regarding claim 10, applicant argues that the claimed invention is distinguished over the prior art because "the cryogenic media purification filter of Lozhkin actually operates in a fashion opposite to that of the instant application" and "[t]hus, in the Lozhkin connection 10 does not emerge opposite a lateral region of a wall extending in a flow axis along which the duct extends" as recited. Applicant's Remarks, p. 5, lines 25-26; p. 6, lines 3-4.

The examiner responds as in the above patentability analysis. Lozhkin et al. discloses a reversal of the flow through the apparatus relative to that of the invention. The recited "upstream" and "downstream" limitations of claim 10 do not distinguish the invention from Lozhkin et al. because apparatus claims must be structurally distinguishable from the prior art. As MPEP 2114 states, "While features of an

apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference)." As is shown in the patentability analysis above, the invention is not structurally distinguishable from the Lozhkin et al. installation.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

27. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise R. Anderson whose telephone number is (571)270-3166. The examiner can normally be reached on Monday through Thursday, from 8:00 am to 6:00 pm.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter D. Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRA

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797